



IN THE UNITED STATES PATENT OFFICE

Application Ser No 10/083,529

Inventor: U.N. Das

Title: A method of stabilizing and potentiating....

Atty docket No UND 99.02 D1

Group Art Unit 1616

Examiner: Alton Pryor

Mail Stop: Technology Center 1616  
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Request for Status of Application

This is a request for knowing the status of pending patent application serial number 10/083,529. It is submitted that in response to an Official Letter mailed on 08/06/2002 in the application, the undersigned agent of record filed a responsive amendment that included the following enclosure-items with an acknowledgment post card:

Responsive amendment of 2 pages

Amended claims on five pages numbered 51-55

Clean copy of amended claims on pages 51-55, and

A single page request for change of the address for correspondence, showing the date of Oct 25, 2002.

A photocopy of the acknowledgment post card, date-stamped by the USPTO on October 31, 2002 and identified as Exhibit "A", is enclosed. Exhibit "A" supports the fact that said enclosure-items were indeed received by the USPTO on October 31, 2002. Also, for ready reference, enclosed is a photocopy of all said enclosure-items, identified as exhibit "B".

All correspondence relating to this pending application should continue to be addressed to the mailing address: **Rama Nath, 2530, Quail Run, Lansdale, PA 19446.**

In as much as all of the objections made in the Official Letter of 08/06/2002 were overcome by amendments in the response already filed as shown in exhibit "B", it is believed that the above-identified application with amended claims is in condition for allowance. An early notice of allowance is earnestly solicited.

Respectfully submitted,

Rama Nath  
Reg No 27,072

February 3, 2004

Lansdale, PA 19446

EXHIBIT

1

A circular postmark from Baltimore, Maryland, dated November 2, 1902, at 5 PM. The text "BALTIMORE" is at the top, "MD" is at the bottom, and "NOV 2 1902" is in the center. The time "5 PM" is stamped to the right of the date.

A black and white photograph of the Organ Cave formations, showing large, stalactite-like structures hanging from the ceiling of a cave. The formations are rugged and textured, resembling an organ pipe. The postcard includes a white border and text.

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UNITED STATES PATENT OFFICE

AIHJ Doc#: UUD99-02-31  
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USPTO ACKNOWLEDGES THE FOLLOWING:  
REMOVING AMENT 2 BASED

- ① RESPONSIVE AMENDMENT 2 PAGES
- ② AMENDED CLAIM PAGES 51-55, FIVE PAGES
- ③ CLEAN COPY OF AMENDED CLAIMS, NUMBERED 51-55, FIVE PAGES

(4) CHANGE OF CORRESPONDENCE ADDRESS, / PAGE

A circular stamp with a double-line border. The outer ring contains the text "U.S. PATENT & TRADEMARK OFFICE" in a clockwise direction. The inner circle contains the text "JC138" at the top, "OCT 3 2002" in the center, and "PATENT & TRADEMARK" at the bottom, also in a clockwise direction.

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RAMA B NATH  
2530, QUAIL RUN  
LANDALE  
PA 19446

Carlsbad Caverns National Park, N.M.

## IN THE UNITED STATES PATENT OFFICE

Application Ser No. 10/083,529

Inventor: U.N.Das

Title: A method of stabilizing and potentiating.....

Atty docket No. UND 99.02 D1

Group Art Unit 1616

Examiner: Alton Pryor

Box: Non-Fee Amendment  
 Assistant Commissioner of Patents  
 Washington DC 20231

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TECH CENTER 1600

## RESPONSIVE AMENDMENT

Responsive to the Official Letter mailed on 08/06/2002, please find enclosed revised claim pages numbered 51 to 55, containing revised claims 2, 3, 4, and 6, and un-revised claims 1, 5, and 7. Also enclosed is a clean copy of all the claims 1-7 as required.

## Remarks

The claims have been amended with a view to overcoming the Examiner's rejection and with a view to advancing the prosecution to completion.

In particular, the term "derivative" at line 3 of claim3 is deleted and replaced by "mixture". The term "mixture" is amply supported by the specification as originally filed, as exemplified by the use of the term "mixture" at least in line 39 of text page 30, and line 36 of text page 31. It is submitted that the term "mixture" now used in claim 3 does not introduce any new matter.

Claim 2 has been amended to replace the term "including" by "comprising", as suggested by the Examiner.

Claims 4 and 6 have been revised to delete the terms "Angiostatin and Endostatin" and insert "anti-angiogenic substances". Support for the term "anti-angiogenic substances" is present in the text as originally filed, at least at line 25 of page 18.

It is submitted that the applicant is not aware of any additional relevant art beyond that which is acknowledged in the text. It is believed that no additional fee is due at this time.

It is noted that the Examiner has not cited any art against any of the claims on file. The Examiner is thanked for indicating allowable subject matter in claims 1, 2, 5 and 7. An early notice of allowance of all the claims 1-7 is earnestly solicited.

Atty Docket No UND 99.02 D1  
US serial no. 10/083,529

It is requested that all future correspondence in this application should be sent to the new mailing address:

Rama B Nath  
2530, Quail Run,  
Lansdale  
PA 19446

If the Examiner considers that a telephone call to the undersigned agent of record would expedite the prosecution of the case to completion, the undersigned agent of record may be reached at 215 661 1140.

Respectfully submitted,

Rama B Nath  
Reg No 27,072

Lansdale, PA 19446

**Amended Claims**

1. A method of inhibiting blood supply to a tumor, comprising the steps of:

(a) locating an artery which carries major blood supply to the tumor, said artery being one that is proximate to the tumor ; and

(a) intra-arterially injecting into the located artery a predetermined quantity of a polyunsaturated fatty acid in the form of a solution of at least one polyunsaturated fatty acid chosen from linoleic acid, gamma-linolenic acid, dihomo-gamma-linolenic acid, arachidonic acid, alpha-linolenic acid, eicosapentaenoic acid, docosahexaenoic acid and cis-parinaric acid and one or more anti-angiogenic substance(s).

2. A method as in claim 1 [including] comprising the step of causing antiangiogenic action, wherein said polyunsaturated fatty acid is in the form of a lithium salt solution and wherein said predetermined quantity of the fatty acid is generally in a range of 0.5 mg to 50 gm.

3. A method as in claim 1 wherein step (b) comprises intra-arterially injecting a predetermined quantity of a polyunsaturated fatty acid in the form of a [derivative] mixture of a polyunsaturated fatty acid including at least one predetermined anti-angiogenic substance to the extent of 1 to 1000 mg/kg/ body weight, said [derivative] mixture of polyunsaturated fatty acid [being] comprising a substance chosen from glycerides, esters, free acids, amides, phospholipids and salts.
4. A method as in claim 1, wherein the polyunsaturated fatty acid is in the form of a lithium salt solution of gamma-linolenic acid and eicosapentaenoic acid/docosahexaenoic acid, including a predetermined quantity of said anti-angiogenic substance chosen from :  
[Angiostatin®, Endostatin®] an anti-angiogenic substance occurring in a living body, platelet factor-4, TNP-470, thalidomide, interleukin-12, and metalloprotease inhibitors, and a predetermined anti-cancer drug.
5. A method of treating a tumor and facilitating visualization of remission of the tumor responsive to treatment, comprising :

- (a) locating an artery which carries a major portion of blood supply to

said tumor and is adjacent to the tumor;

(b) obtaining an initial radiographic image of the tumor region;

(c) injecting into the located artery a mixture of at least

(i ) an oily lymphographic agent as a carrier containing one or more  
of anti-angiogenic substance(s)

(ii) a lithium salt solution of at least one polyunsaturated fatty acid  
chosen from linoleic acid, gamma-linolenic acid, dihomo-gamma-  
linolenic acid, arachidonic acid, alpha-linolenic acid,  
eicosapentaenoic acid, docosahexaenoic acid and cis-parinaric  
acid

(d) obtaining second and subsequent radiographic images of the tumor  
region after predetermined lapses of time; and

(e) comparing the initial radiographic image with the second and  
subsequent images to assess an extent of remission of the tumor.

6. A method as in claim 5 wherein step ( c ) comprises intra-arterially  
injecting a mixture containing elements chosen from : an anti-

angiogenic substance [chosen] occuring in a living body, [from Angiostatin®, Endostatin®] , platelet factor-4, TNP-470, thalidomide, and interleukin-12, causing anti-angiogenic action by inhibiting the blood supply to the tumor, wherein further the oily lymphographic agent acts as a carrier for said anti-angiogenic substance(s), and also for the lithium salt solution of predetermined quantities of gamma-linolenic acid, eicosapentaenoic acid and/or docosahexaenoic acid.

7. A method of treating a cancerous tumor, comprising
  - (a) using an oily lymphographic agent as a carrier for
    - (i) at least one polyunsaturated fatty acid chosen from a lithium salt of at least one of linoleic acid, gamma-linolenic acid, dihomo-gamma-linolenic acid, arachidonic acid, alpha-linolenic acid, eicosapentaenoic acid, docosahexaenoic acid, and cis-parinaric acid
    - (ii) one predetermined anti-cancer drug, and anti-angiogenic substance(s) which are mixed with polyunsaturated fatty acids or co-valently linked to fatty acids

(b) administering a predetermined quantity of selected fatty acids and predetermined anti-angiogenic substance in the oily lymphographic agent as a carrier.

**Clean Copy of Claims**

1. A method of inhibiting blood supply to a tumor, comprising the steps of:

(a) locating an artery which carries major blood supply to the tumor, said artery being one that is proximate to the tumor ;

and

(a) intra-arterially injecting into the located artery a predetermined quantity of a polyunsaturated fatty acid in the form of a solution of at least one polyunsaturated fatty acid chosen from linoleic acid, gamma-linolenic acid, dihomo-gamma-linolenic acid, arachidonic acid, alpha-linolenic acid, eicosapentaenoic acid, docosahexaenoic acid and cis-parinaric acid and one or more anti-angiogenic substance(s).

2. A method as in claim 1 comprising the step of causing antiangiogenic action, wherein said polyunsaturated fatty acid is in the form of a lithium salt solution and wherein said predetermined quantity of the fatty acid is generally in a range of 0.5 mg to 50 gm.

3. A method as in claim 1 wherein step (b) comprises intra-arterially injecting a predetermined quantity of a polyunsaturated fatty acid in the form of a mixture of a polyunsaturated fatty acid including at least one predetermined anti-angiogenic substance to the extent of 1 to 1000 mg/kg/ body weight, said mixture of polyunsaturated fatty acid comprising a substance chosen from glycerides, esters, free acids, amides, phospholipids and salts.
4. A method as in claim 1, wherein the polyunsaturated fatty acid is in the form of a lithium salt solution of gamma-linolenic acid and eicosapentaenoic acid/docosahexaenoic acid, including a predetermined quantity of said anti-angiogenic substance chosen from: an anti-angiogenic substance occurring in a living body, platelet factor-4, TNP-470, thalidomide, interleukin-12, and metalloprotease inhibitors, and a predetermined anti-cancer drug.
5. A method of treating a tumor and facilitating visualization of remission of the tumor responsive to treatment, comprising :
  - (a) locating an artery which carries a major portion of blood supply to

said tumor and is adjacent to the tumor;

(b) obtaining an initial radiographic image of the tumor region;

(c) injecting into the located artery a mixture of at least

- (i) an oily lymphographic agent as a carrier containing one or more of anti-angiogenic substance(s)
- (ii) a lithium salt solution of at least one polyunsaturated fatty acid chosen from linoleic acid, gamma-linolenic acid, dihomo-gamma-linolenic acid, arachidonic acid, alpha-linolenic acid, eicosapentaenoic acid, docosahexaenoic acid and cis-parinaric acid

(d) obtaining second and subsequent radiographic images of the tumor region after predetermined lapses of time; and

(e) comparing the initial radiographic image with the second and subsequent images to assess an extent of remission of the tumor.

6. A method as in claim 5 wherein step (c) comprises intra-arterially injecting a mixture containing element/s chosen from : an anti-

angiogenic substance occurring in a living body, platelet factor-4, TNP-470, thalidomide, and interleukin-12, causing anti-angiogenic action by inhibiting the blood supply to the tumor, wherein further the oily lymphographic agent acts as a carrier for said anti-angiogenic substance(s), and also for the lithium salt solution of predetermined quantities of gamma-linolenic acid, eicosapentaenoic acid and/or docosahexaenoic acid.

7. A method of treating a cancerous tumor, comprising
  - (a) using an oily lymphographic agent as a carrier for
    - (i) at least one polyunsaturated fatty acid chosen from a lithium salt of at least one of linoleic acid, gamma-linolenic acid, dihomogamma-linolenic acid, arachidonic acid, alpha-linolenic acid, eicosapentaenoic acid, docosahexaenoic acid, and cis-parinaric acid
    - (ii) one predetermined anti-cancer drug, and anti-angiogenic substance(s) which are mixed with polyunsaturated fatty acids or co-valetly linked to fatty acids

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(b) administering a predetermined quantity of selected fatty acids and predetermined anti-angiogenic substance in the oily lymphographic agent as a carrier.

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PTO/SB/123 (10-00)

Approved for use through 10/31/2002. OMB 0651-0035

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Patent Number	
Issue Date	
Application Number	10/083, 589
Filing Date	2/27/2002
First Named Inventor	U. N. DAS

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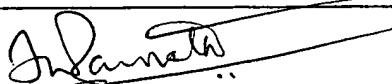
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 Assignee of record of the entire interest. See 37 CFR 3.71.  
 Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).  
 Attorney or agent of record.

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Typed or Printed Name	RAMA B NATH	
Signature		Reg. No. 27,072
Date	Oct 25, 2002	

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

\*Total of \_\_\_\_\_ forms are submitted.

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